

AUG 10 1982

MEMORANDUM

Subject: 40 CFR 180.1(h). Proposed technical amendment
(tangerines).

From: M. Nelson, Chemist *my*
Residue Chemistry Branch
Hazard Evaluation Division (TS-769)

Thru: C. Trichilo, Chief
Residue Chemistry Branch
Hazard Evaluation Division (TS-769) *CT*

To: H. Jamerson, PM Team No. 43
Registration Division (TS-767)

and

Toxicology Branch
Hazard Evaluation Division (TS-769)

G.M. Markle, National Coordinator and Dr. R.H. Kupelian, National Director, IR-4 State Agricultural Experiment Station, Cook College, Rutgers University, on behalf of the IR-4 Technical Committee, request that 40 CFR 180.1(h) be amended to read as follows:

A

B

Tangerines-----Mandarins, Tangelos, Tangors,
Tangerines, and hybrids of these.

The purpose of this proposed technical amendment is to clarify and update the entry for "tangerines".

40 CFR 180.1(h) presently reads as follows:

A

B

Tangerines-----Tangelos, Tangerines

Discussion. Based upon information made available to us [ref. Food and Feed Crops of the USA (1971) and The Citrus Industry (1967)], there are 5 major kinds of citrus fruits produced commercially in the USA: grapefruit, lemon, lime, (sweet) orange, and mandarin.

The term "mandarin" is used interchangeably with the term "tangerine". [Note: horticulturists have tended to restrict the use of the term tangerine to the mandarins of a deep orange-red color; however, this is a usage of convenience only, and the tangerines do not comprise a group of natural significance.]

Distinctive features of the mandarin group as a whole are as follows:

"Fruit very small to medium (prevailing smaller than the oranges), oblate to highly compressed form; rind and fruit sections loosely adherent (more so than any of the oranges); open core (much more so than any of the oranges); flavor and aroma commonly distinctive; seeds with greenish cotyledons (minor exceptions).

"Tree very cold-resistant (more so than any of the oranges) but fruit not; distinctive leaf petiole (wings line-margined with few exceptions); blade notch-pointed and with main vein prominent above as well as below; spines small and few or lacking; flowers single or in unbranched inflorescences and prevailing small (minor exceptions)."

A characteristic of citrus fruits in general is their ability to cross with each other, and many such crosses have been made by breeders and some have originated by chance.

As a result, there are now in commerce various mandarin hybrids. (Hybrids of other citrus are not relevant to this review and therefore will not be discussed). These are of three general classifications: tangelos, tangors, and "other mandarin-like fruits" of uncertain origin.

Tangelos are mandarin x grapefruit (or its close botanical relative, the pummelo) hybrids, and constitute a highly varied group that exhibits characteristics that are both typical of the parents and intermediate between them. In general, those of greatest commercial interest fall into the mandarin-like group (eg., minneolas and uglis, et al.).

Tangors are mandarin x (sweet) orange hybrids, and are generally intermediate in characteristics. Several varieties are grown to a limited extent, with the so-called "Temple orange" being the most important.

In addition to the tangelos and tangors, there are certain other citrus fruits, grown in the Orient, that have rather obvious resemblances to the mandarin. Principal in horticultural importance among these are the Calamondin (mandarin x kumquat, possibly), Iyo (a natural tangor, perhaps), and Rangpur (resembles a mandarin x lemon cross). These have not attained economic significance in the USA.

Recommendation

RCB has no objection to the petitioners' proposed revision for 40 CFR 180.1(h) to redefine the commodity definition for tangerines (aka mandarins).

TS-769:RCB:MNelson:vg:CM#2:Rm810:X77377:8/9/82

cc: RF, reviewer, Commodity Definitions File, IR-4 Minor Uses
File, TOX, circ., PP# 7E1956

RDI: Quick, 8/4/82; Schmitt, 8/4/82